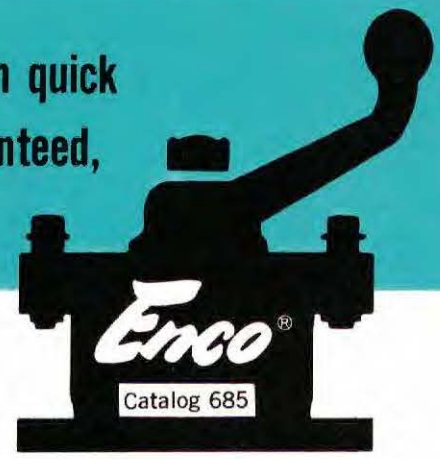
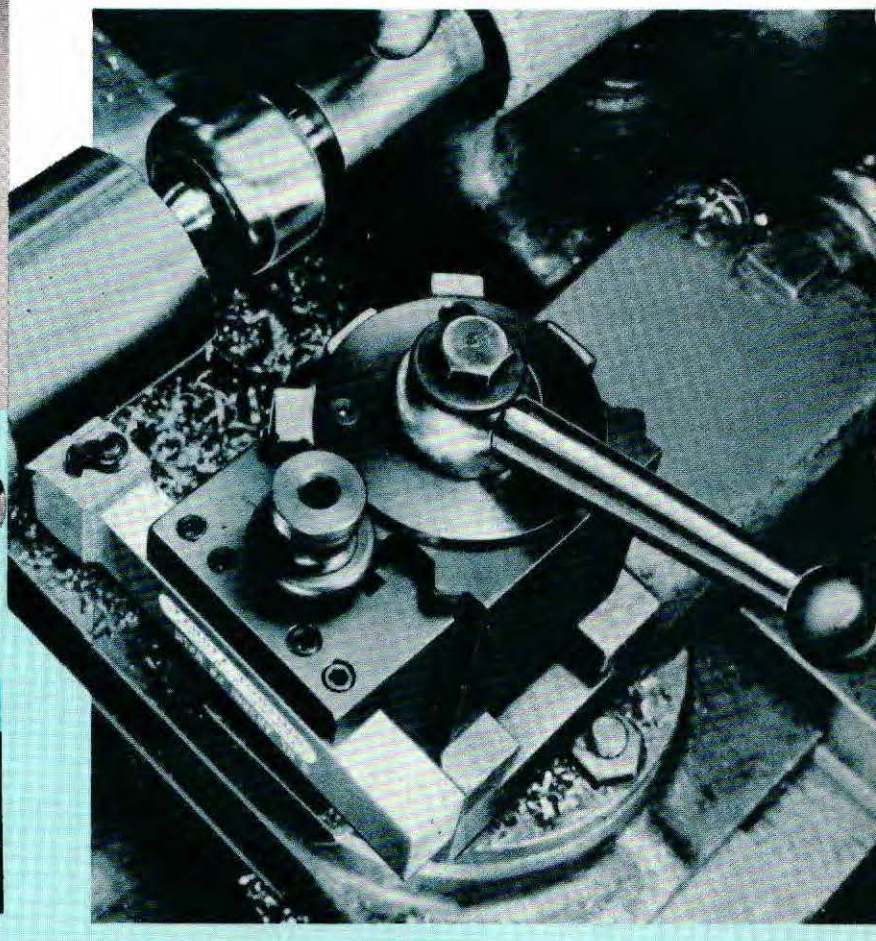
NEW America's lowest priced heavy duty precision quick change toolpost with .0001″ accuracy guaranteed,

FEATURING 3 TOOL HOLDER SIDES



Enco
MANUFACTURING CO.
4520 W. Fullerton Ave., Chicago, Ill. 60639
Phone: 312-227-6200

(E) Cut-off or Parting Tool Holder
(B) "V" Groove Facing, Turning and Boring Bar Holder
(A) Turning and Facing Tool Holder
Quick Action Top Handle RIGIDLY LOCKS Tool Holder
Exclusive Locking Pin Holds Toolpost and T-Nut Rigidly, To Prevent Sliding Under Heavy Cut.
(D) Knurling and Facing Tool Holder
Patent Pending
(C) Heavy Duty Drill and Boring Bar Holder



ENCO T-SLOT QUICK CHANGE TOOLPOST

Toolpost with set of 6 holders—2 A holders, 1 ea. B,C,D,E holders		Toolpost Only		Lathe Swing	Square	Thick
Model No.	Price	Model No.	Price			
Q635	$168.65	Q35	$68.00	9″ to 15″	2¾″	2½″
Q645	241.60	Q45	96.00	13″ to 19″	3½″	3″

Fitted T-Nut and Cap Screw Included FREE. Available for Turret lathe cross slide mounting. Call or write for quotation.

1—**ENCO TOOL HOLDERS ARE INTERCHANGEABLE** between Quick Change and Turret Quick Change Toolposts—Ends Tool Holder Duplication—Result: Saves 50% and More of Tool Holder Cost
2—Three Hardened and Ground Prismatic "V" ways, Instead of One or Two, Allows Tool to get Closer to Headstock and Tailstock For Maximum Tool Clearance and Minimum Overhang
3—Vertical Height Adjustment on Tool Holders Ends Need for Shims —Permits Pre-Set Tooling
4—Sharpen Tools Without Removing From Tool Holder
5—Exclusive Toolholder Design Gives Greater Tool Capacity

SATISFACTION GUARANTEED OR MONEY BACK

ENCO QUICK CHANGE TOOL HOLDERS

Tools not included

(A) Turning and Facing Tool Holders

Model No.	Price	Tool Capacity
35A	14.75	⅜″ to ¾″
45A	20.60	½″ to 1″

(B) Turning, Facing and Boring Bar Holders

35B	15.35	Boring bars shanks to ⅝″ diam.†
45B	21.60	Boring bars shanks to ¾″ diam.†

(C) Heavy Duty Drilling and Boring Bar Holders

35C	21.60	Up to 1″ diam. (Use No. 1 or 2 Morse Taper)
45C	26.40	Up to 1¼″ diam. (Use No. 1, 2, or 3 Morse Taper)

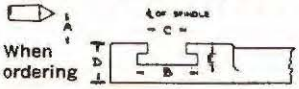
(D) Combination Knurling, Facing Tool Holders

Model No.	Price	Tool Capacity
35D	25.50*	Knurls—⅝″ diam. 5/16″ wide, 7/32″ axle
45D	30.50*	Knurls—¾″ diam. ⅜″ wide, ¼″ axle

(E) Cut-Off or Parting Tool Holders (Use Type "B" or "T" ASA Blades)

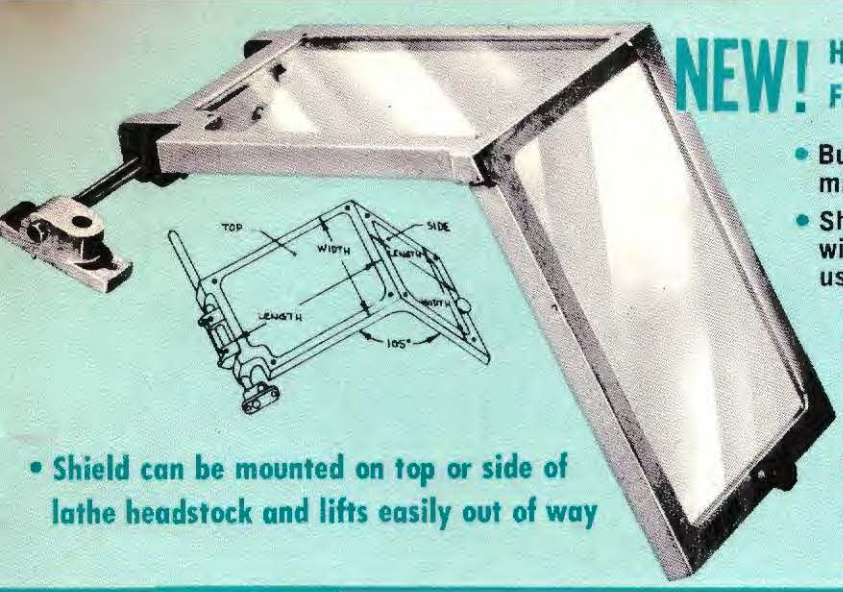
35E	18.70	11/16″ by 1/16″ to 3/16″
45E	25.90	13/16″ by 1/16″ to ¼″

†Same facing and turning tool sizes as "A" holder *Includes one set of knurls



When ordering please give A,B,C,D,E dimensions.

See Your Enco Dealer



NEW! HEAVY DUTY ALUMINUM FRAME CHUCK GUARD

- Built-in adjustable stop makes positioning easy
- Shield is attached to lathe with rigid mounting bracket using two 3/8" bolts

- Shield can be mounted on top or side of lathe headstock and lifts easily out of way

ENCO HEAVY DUTY CHUCK GUARDS—COMPLETE

MODEL NO.	Suggested Lathe Size	LOCATION	WIDTH	LENGTH	PRICE EACH
426	9" to 15"	TOP SIDE	8¼" 8¼"	11" 9"	$38.00
427	15" and up	TOP SIDE	10¼" 10¼"	14" 13¾"	$48.00

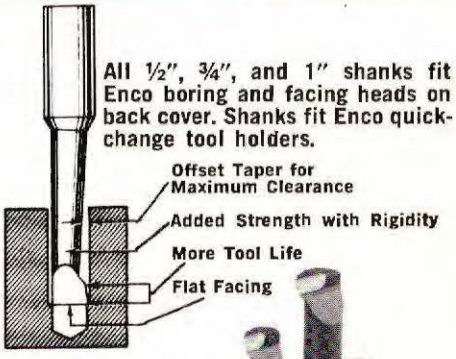
ENCO REPLACEMENT SHIELDS ONLY—5/32" THICK

MODEL NO.	LOCATION	CARTON OF 1	CARTON OF 3	CARTON OF 6
4264	TOP	$3.50	$ 8.95	$16.40
4265	SIDE	3.25	8.65	15.75
4276	TOP	5.85	15.50	28.00
4277	SIDE	5.85	15.50	28.00

NEW Enco PRECISION BORING BARS

1. UP TO 100% LONGER TOOL LIFE. 2. LOW PRICES SAVE YOU UP TO 40%.
3. SHANK GUARANTEED AGAINST BREAKAGE—FREE REPLACEMENT.

• Tool life is extended because each bar has far more steel behind the cutting edge. Result—bar takes a heavier chatter free cut, deeper bore and gives more precise work. • The same bar can bore flat-bottom hole or face. • It is easy to grind the bar on the cutting end for special tools such as grooving and threading tools or for automatic operations. • All shanks are ground to +0" –.0005".



All ½", ¾", and 1" shanks fit Enco boring and facing heads on back cover. Shanks fit Enco quick-change tool holders.

CARBIDE TIPPED BORING BARS. 4140 Cold Rolled Steel shanks are ground and hardened to 50 Rockwell on C Scale. These bars are Black oxide coated, with the tip diamond ground for instant use. Minimum bore sizes are available in 3 lengths—short for counter boring and short hole work, medium for general boring, long for extra deep hole boring.

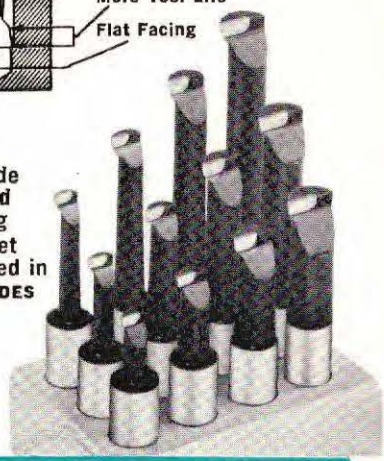
A Shank Dia.	B Length	C Bore Depth	D Min. Bore	Model No.	Price Each	Price Per Set
3/8"	2"	3/4"	5/16"	801	$ 3.95	Model No. 9010 1 of each size in storage rack 9 Pc. Set $40.60
	2-3/8"	1-1/8"	5/16"	802	4.05	
	2-3/4"	1-1/2"	5/16"	803	4.15	
	2-3/16"	15/16"	3/8"	804	4.40	
	2-21/32"	1-13/32"	3/8"	805	4.50	
	3-1/8"	1-7/8"	3/8"	806	4.65	
	2-3/8"	1-1/8"	7/16"	807	4.85	
	2-15/16"	1-11/16"	7/16"	808	4.95	
	3-1/2"	2-1/4"	7/16"	809	5.10	
1/2"	2-1/4"	3/4"	5/16"	810	5.30	Model No. 9020 1 of each size in storage rack 9 Pc. Set $53.00
	2-5/8"	1-1/8"	5/16"	811	5.40	
	3.0"	1-1/2"	5/16"	812	5.55	
	2-5/8"	1-1/8"	7/16"	813	5.80	
	3-3/16"	1-11/16"	7/16"	814	5.90	
	3-3/4"	2-1/4"	7/16"	815	6.00	
	3.0"	1-1/2"	9/16"	816	6.25	
	3-3/4"	2-1/4"	9/16"	817	6.35	
	4-1/2"	3.0"	9/16"	818	6.45	
5/8"	2-1/4"	3/4"	5/16"	819	6.55	Model No. 9030 1 of each size 12 Pc. Set $97.95
	2-5/8"	1-1/8"	5/16"	820	6.80	
	3.0"	1-1/2"	5/16"	821	7.00	
	2-5/8"	1-1/8"	7/16"	822	7.45	
	3-3/16"	1-11/16"	7/16"	823	7.70	
	3-3/4"	2-1/4"	7/16"	824	7.95	
	3.0"	1-1/2"	9/16"	825	8.35	
	3-3/4"	2-1/4"	9/16"	826	8.60	
	4-1/2"	3.0"	9/16"	827	8.85	
	3-3/8"	1-7/8"	11/16"	828	9.30	
	4-5/16"	2-13/16"	11/16"	829	9.55	
	5-1/4"	3-3/4"	11/16"	830	9.85	
3/4"	3-1/8"	1-1/8"	7/16"	831	7.75	Model No. 9040 1 of each size 12 Pc. Set $114.50
	3-11/16"	1-11/16"	7/16"	832	8.00	
	4-1/4"	2-1/4"	7/16"	833	8.25	
	3-1/2"	1-1/2"	9/16"	834	8.65	
	4-1/4"	2-1/4"	9/16"	835	8.90	
	5.0"	3.0"	9/16"	836	9.15	
	3-7/8"	1-7/8"	11/16"	837	9.60	
	4-13/16"	2-13/16"	11/16"	838	9.95	
	5-3/4"	3-3/4"	11/16"	839	10.20	
	4-1/4"	2-1/4"	13/16"	840	10.95	
	5-3/8"	3-3/8"	13/16"	841	11.35	
	6-1/2"	4-1/2"	13/16"	842	11.75	
1"	5-3/4"	3-3/4"	11/16"	843	12.00	
	5-3/8"	3-3/8"	13/16"	844	13.75	

M3 HIGH SPEED COBALT STEEL BORING BARS. Shanks are ground and hardened to 64-66. Rockwell on C Scale. All sizes come in 2 lengths—short for counter boring and short hole boring, long with offset taper and extra length for more rigidity in deep hole boring.

A Shank Dia.	B Length	C Bore Depth	D Min. Bore	Model No.	Price Each	Price Per Set
3/8"	1-13/16"	9/16"	3/16"	860	$ 4.15	Model No. 9050 1 of each size 6 Pc. Set $37.30
	2-3/16"	15/16"	3/16"	861	4.25	
	2.0"	3/4"	1/4"	862	4.40	
	2-1/2"	1-1/4"	1/4"	863	4.55	
	2-3/16"	15/16"	5/16"	864	4.75	
	2-13/16"	1-9/16"	5/16"	865	4.85	
	2-3/8"	1-1/8"	3/8"	866	5.10	
	3-1/8"	1-7/8"	3/8"	867	5.25	
1/2"	2-1/8"	3/4"	1/4"	868	5.25	Model No. 9060 1 of each size 10 Pc. Set $58.90
	2-5/8"	1-1/4"	1/4"	869	5.35	
	2-5/16"	15/16"	5/16"	870	5.50	
	2-15/16"	1-9/16"	5/16"	871	5.60	
	2-1/2"	1-1/8"	3/8"	872	5.80	
	3-1/4"	1-7/8"	3/8"	873	5.90	
	2-11/16"	1-5/16"	7/16"	874	6.15	
	3-9/16"	2-3/16"	7/16"	875	6.25	
	2-7/8"	1-1/2"	1/2"	876	6.50	
	3-7/8"	2-1/2"	1/2"	877	6.60	
5/8"	2-5/8"	1-1/8"	3/8"	878	7.10	Model No. 9070 1 of each size 10 Pc. Set $90.60
	3-3/8"	1-7/8"	3/8"	879	7.40	
	2-13/16"	1-5/16"	7/16"	880	7.85	
	3-11/16"	2-3/16"	7/16"	881	8.25	
	3.0"	1-1/2"	1/2"	882	8.75	
	4.0"	2-1/2"	1/2"	883	9.10	
	3-3/16"	1-11/16"	9/16"	884	9.90	
	4-5/16"	2-13/16"	9/16"	885	10.25	
	3-3/8"	1-7/8"	5/8"	886	10.80	
	4-5/8"	3-1/8"	5/8"	887	11.20	
3/4"	2-7/8"	1-1/8"	3/8"	888	8.50	Model No. 9080 1 of each size 14 Pc. Set $144.70
	3-5/8"	1-7/8"	3/8"	889	8.70	
	3-1/16"	1-5/16"	7/16"	990	9.00	
	3-15/16"	2-3/16"	7/16"	891	9.30	
	3-1/4"	1-1/2"	1/2"	892	9.60	
	4-1/4"	2-1/2"	1/2"	893	9.90	
	3-7/16"	1-11/16"	9/16"	894	10.15	
	4-9/16"	2-13/16"	9/16"	895	10.45	
	3-5/8"	1-7/8"	5/8"	896	10.80	
	4-7/8"	3-1/8"	5/8"	897	11.05	
	3-13/16"	2-1/16"	11/16"	898	11.45	
	5-3/16"	3-7/16"	11/16"	899	11.65	
	4.0"	2-1/4"	3/4"	900	11.95	
	5-1/2"	3-3/4"	3/4"	901	12.20	

CARBIDE TIPPED BARS ARE STOCKED IN 4 GRADES; C-2 for general purpose boring in cast iron and non-ferrous metals, C-4 for precision boring in cast iron and non-ferrous metals, C-6 for general purpose boring in steel and steel alloys, C-8 for precision boring in steel and steel alloys.
ORDER BY MODEL NUMBER. SPECIFY GRADE AND MODEL NUMBER WHEN ORDERING CARBIDE TIPPED BARS. (EXAMPLE): To order ½" CARBIDE SET for general purpose cast iron, order 9020-2.

Enco Carbide Tipped Boring Bar Set Stocked in 4 GRADES



M3 HIGH SPEED COBALT Steel Boring Bar Set

TINY-TITAN BORING BARS AND BORING BAR HOLDERS

TINY TITAN BORING BARS ONLY

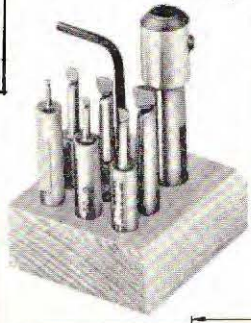
Min. Bore Dia.	Max. Bore Depth	Shanks	Length	C-2 Grade Carbide Tipped Model	C-2 Grade Carbide Tipped Price	High Speed Steel Model	High Speed Steel Price
1/16"	5/16"	1/4"	2"	903	$ 9.65	909	$4.85
3/32"	15/32"	1/4"	2"	904	10.60	910	4.85
1/8"	5/8"	1/4"	2"	905	11.55	911	4.85
5/32"	25/32"	1/4"	2"	906	13.05	912	4.85
3/16"	15/16"	1/4"	2"	907	14.25	913	4.85
1/4"	1-1/4"	1/4"	2"	908	17.50	914	4.85

HOLDERS ONLY / SET—6 BARS, 1 HOLDER

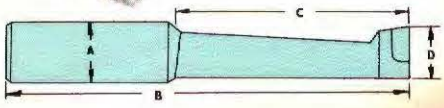
Size	Model	Price	Carbide Tipped Model	Carbide Tipped Price	High Speed Steel Model	High Speed Steel Price
3/8"	915	$7.00	919	$83.60	923	$36.10
1/2"	916	7.00	920	83.60	924	36.10
5/8"	917	8.00	921	84.60	925	37.10
3/4"	918	8.00	922	84.60	926	37.10

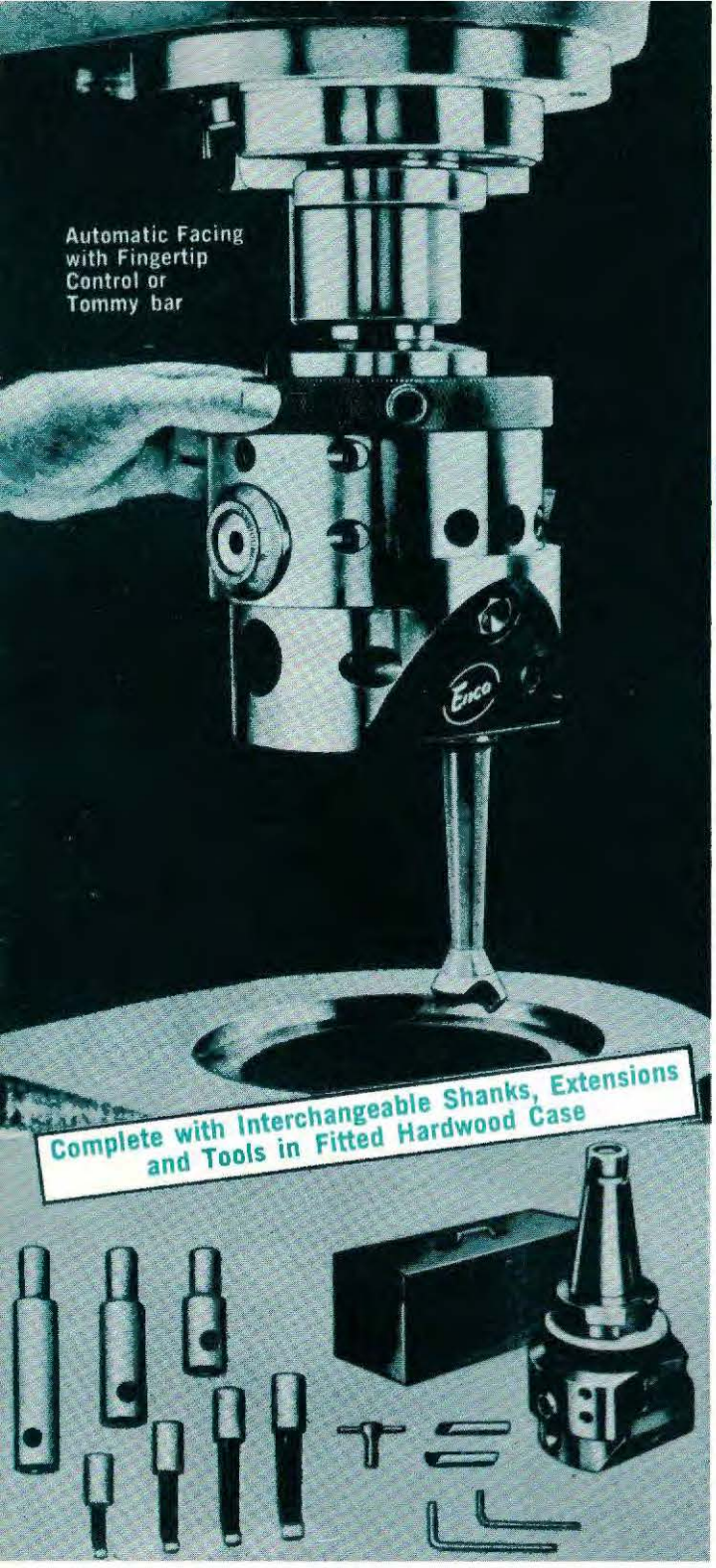
1 of each size

Enco Tiny-Titan Boring Bars and Holder Set



These tools are designed for precision small hole boring. Enco carbide and high speed steel small hole boring bars are interchangeable in holders. Holders are ground from the solid.





NEW Enco Automatic Boring and Facing Heads

Permits Automatic Facing WITHOUT STOPPING SPINDLE

AT AMERICA'S LOWEST PRICE

	#1100 HEAD	#1200 HEAD	#1300 HEAD
PRICE For Complete Set in Fitted Hardwood Case	**$187.00** 1 H.S.S. 5 carbide tools, std. shank 1 extension, wrenches, case	**$245.00** 1 H.S.S. 4 carbide tools, standard shank, 3 extensions wrenches, case	**$385.00** 4 carbide tools standard shank, 3 extensions, wrenches, case
Diameter of Body	2.36″	3.54″	5.9″
Height without shank	2.75″	3.74″	4.72″
No. of feeds per rev.	1 2	1 2 3	1 2 3
Automatic feed (radial) per rev.	.0025″ .005″	.0025″ .005″ .0075″	.0025″ .005″ .0075″
Radial movement for one graduation of vernier	.0005″	.0005″	.0005″
Vertical tool positions	3	3	3
Minimum capacity	0.125″	0.2″	0.4″
Maximum capacity	9¾″	13¾″	21⅝″
Maximum carriage movement (radial)	¾″	1.2″	2.0″
Tool shank diameter	½″	¾″	1″

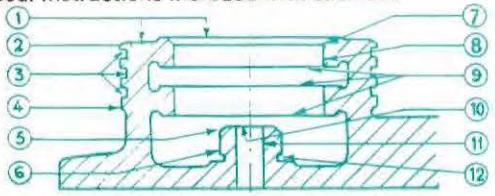
ENCO HARDENED AND GROUND STANDARD SHANKS

SHANKS FOR #1100 HEAD			SHANKS FOR #1200 HEAD			SHANKS FOR #1300 HEAD		
Type	Model	Price	Type	Model	Price	Type	Model	Price
R-8	1110	$13.00	R-8	1210	$14.00	4 M.T. Draw Bar	1310	$18.00
2 M.T. Tang	1111	10.00	3 M.T. Tang	1211	12.00	5 M.T. Draw Bar	1311	25.00
2 M.T. Draw Bar	1112	12.50	3 M.T. Draw Bar	1212	14.00	6 M.T. Draw Bar	1312	32.00
3 M.T. Tang	1113	10.50	4 M.T. Tang	1213	12.50	40 Std.	1313	25.00
3 M.T. Draw Bar	1114	13.00	4 M.T. Draw Bar	1214	14.50	50 Std.	1314	36.00
30 Std.	1115	18.00	5 M.T. Tang	1215	17.00			
40 Std.	1116	22.00	5 M.T. Draw Bar	1216	20.00	Special shank's available. When ordering send specifications.		
9 B & S	1117	13.00	30 Std.	1217	20.00			
¾ Straight	1118	10.00	40 Std.	1218	23.00			
			50 Std.	1219	34.00			
			9 B & S	1220	14.00			

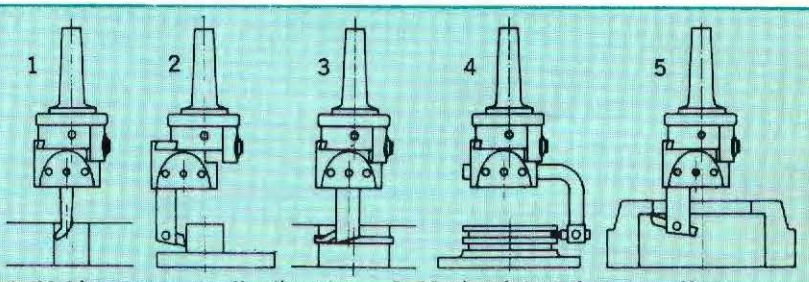
A high precision tool designed for accurate tooling and production work. All working parts are hardened and ground.

MANUAL OR AUTOMATIC FEED

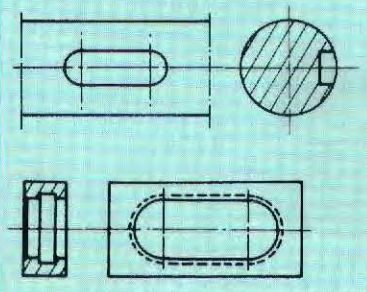
Carriage is operated manually when spindle is stopped. Automatic feed is accomplished while the spindle is turning (see photo). Automatic feed can be measured when using .0025 radial feed. Instructions included with each set.



1. Outer face of large diameter
2. Outer chamfer
3. Outer grooves for segment or circlip
4. Outside diameter
5. Internal chamfer
6. Outside diameter of a sunken boss
7. Internal chamfer
8. Large diameter bore
9. Face and undercut internal groove
10. Small diameter internal facing
11. Small diameter bore
12. Undercut groove



1—Making very small diameter bore (carriage locked)
2—Turning a boss (carriage locked) trueing top and bottom faces. (Automatic feed)
3—Making internal grooves (Automatic feed)
4—Making external grooves (Automatic feed)
5—Truing internal face (Automatic feed)



Making a keyway

After adjusting tool to obtain correct width of keyway, carriage is locked. Vertical and longitudinal movements are used to get required depth and length.

Making Groove and Chamfer

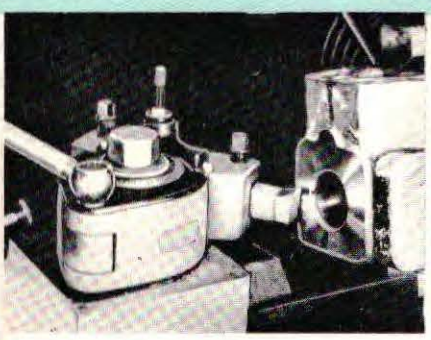
Groove is cut by using automatic movement of carriage at 1 end to engage tool up to required depth. Carriage is then locked and table moved to the same degree as with previous operation without altering the initial clamping of workpiece.

Enco NEW 40 POSITION

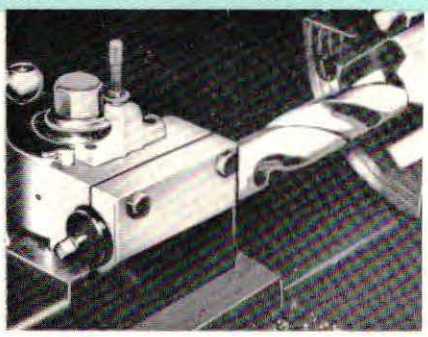
.0001" Precision Heavy Duty Quick Change Toolpost & Holders

- **Maximum Rigidity Results When Toolpost Pulls Toolholder Securely Against Hardened And Ground Interlocking Splines Like a "Bear Hug"**
- **Tools can be sharpened Without Removal From Tool Holder**
- **Guaranteed Accuracy Within .0001"**

All parts are precision manufactured from high quality chrome steel, through-hardened to 60 Rockwell. Greater tool capacity built-in to every tool holder, even for lathes with low center height.



Cutter works obliquely in one of 40 positions.



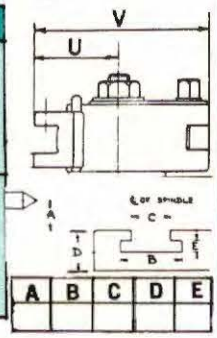
Drilling with automatic feed, using boring bar holder with Morse taper bushing.

Finger-tip height adjustment screw and lock sets tool — ends need for shims.

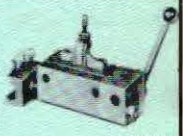
Curved Design for Maximum Tool Clearance

ENCO T-SLOT QUICK CHANGE TOOL POSTS

Tool Post with Set of 6 Holders including 3G Holders 1 Each—H,J,T Holders		Tool Post Only		Lathe Swing	U	V
Model	Price	Model	Price			
6E-1	$168.00	E-1	$52.00	Under 9"	1 3/16"*	2 3/4"
6E-2	248.00	E-2	95.00	6"-13"	1 51/64"	3 15/16"
6E-3	382.00	E-3	139.00	13"-20"	2 51/64"	5 29/32"
6E-4	590.00	E-4	196.00	18"-30"	3 13/16"	7 7/8"
5E-5*	1,090.00	E-5	465.00	25"-Up	5 1/2"	9 13/16"



*Set 5E-5 with 5 Holders 3-G, 1H, 1J. Fitted T-Nut and Cap Screw Included FREE.

"G" TURNING & FACING HOLDER	"H" BORING HOLDER	"J" HEAVY DUTY DRILLING & BORING	"L" M.T. BUSHING FOR "J"	"M" BORING BAR FOR "J"	"P" H.S.S. TOOL BIT HOLDER	"T" CUT-OFF HOLDER	"FE" SCREW CUTTING HOLDER external	 "FI" SCREW CUTTING HOLDER internal
MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE	MODEL PRICE
E1-G $18.75	E1-H $18.75	E1-J $20.00			E1-P $21.75	E1T $21.00		
						BLADE 7.00		
1/16"-1/2" TOOL	1/8-1/2 DIA.	15/32 DIA.			1/4" TOOL	E1TB 3/32" x 3/8"		
			E2L1			E2T 31.00	E2FE $79.00	
E2-G 23.00	E2-H 24.00	E2-J 29.00	1 M.T. 7.50		E2-P 28.00	BLADE	BLADE*	E2F1 $80.00
			E2L2			E1TB 7.00	E2FEBS 7.00	
3/8"-3/4" TOOL	3/8-3/4 DIA.	1 3/16 DIA.	2 M.T. 7.50		3/8" TOOL	3/32" x 3/8"	E2FEBC 12.50	1/2" TOOL
			E3L3			E3T 48.00	E3FE 89.00	
E3-G 37.00	E3-H 41.00	E3-J 43.00	3 M.T. 9.00	E3-M 16.00	E3-P 45.00	BLADE	BLADE*	
			E3L4			E3TB 9.00	E3FEBS 9.00	E3F1 103.00
1 1/16-1 1/4 TOOL	3/4-1 1/4 DIA.	1 37/64 DIA.	4 M.T. 9.75	1 37/64 x 19 11/16	1/2" TOOL	1/8" x 7/8"	E3FEBC 14.50	3/4" TOOL
			E4L3	E3-M 16.00		E4T 87.00	E4FE 120.00	
E4-G 59.00	E4-H 64.00	E4-J 66.00	3 M.T. 11.00	1 37/64 x 19 11/16	E4-P 59.00	BLADE	BLADE*	
			E4L4	E4-M 32.00		E4TB 11.00	E4FEBS 9.00	E4F2 140.00
3/4-1 9/16 TOOL	1 1/4-1 31/32 DIA.	1 31/32 DIA.	4 M.T. 13.00	1 31/32 x 27 9/16	5/8" TOOL	3/16" x 1"	E4FEBC 14.50	3/4 TOOL
E5-G 110.00	E5-H 145.00	E5-J 150.00	E4L4			*E2FEBS, E3FEBS, E4FEBS H.S.S.—E2FEBC, E3FEBC, E4FEBC, T. CARBIDE—		
1"-2" TOOL	1 1/2-2 3/4 DIA.	2 3/4 DIA.	4 M.T. 13.00			ALL BLADES 60°		

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